3-6-2017 Discussion Comments

Background Work Supporting the Evaluation of Feasibility and Initial Design of an Interim Cap for the A

	Information Requirement	Relevance	A. Scope of Work - Minimal	B. Scope of Work - Expanded
	An initial approximation of interim cap performance objectives is key in fully scoping the information requirements 1-11 below.			
1	Physical characterization of the nearshore area including the full width of the waterway	- presentation of data - impact of cap placement relative to full waterway	- use existing bathymetery and GIS to create cross sections and calculate areas	- create 3D visualization of waterway and subsurface
2	3D extent of DNAPL beneath the nearshore area	- determine the extent of required cap - determine areas with seepage potential	- use existing boring data to create conservative confirmed/probable and potential zones	- collection of additional shallow cores to increase confidence in zone boundaries
3	Groundwater discharge zones and discharge rates in the nearshore area	- design parameter for the cap - assessment of potential alteration of groundwater flow field by the cap	- use existing groundwater flow data from the Aerovox Phase 2 and 3 reports for screening level assessment - estimate conservative/"worst-case" potential discharge scenarios to determine if there are signficant data gaps	- expand on existing or develop a new Modflow application to evaluate the impace of the cap - field measurement of discharge parameters
4	Flux of dissolved phase contaminants	- design parameter for the cap - assess impacts of delayed removal of source	- use existing groundwater data and flux calculation from the Aerovox Phase 2 and Phase 3 reports for screening level assessment	- add transport to the groundwater flow model application to evaluate effectiveness/impact of the cap - field measurement of flux — A must
5	Physical characterization of the ambient sediment	- design parameter for the cap	- conservative assumption of sediment properties based on previous experience and data from comparable sites	- sub-bottom profiling - CPT - collection of cores for lab analysis

- Vane Shear Test?

			A. Minimal SOW	B. Expanded SOW
6	Gas ebulition	- design parameter for the cap	- literature review of cap design and performance at comparable sites -Perform "sensitivity" analysis to assess gas production rates that would be problematic	- enlist support of an ebulition specialist + collection of site specfic data
7	Wave and current energy	- design parameter for the cap	- pull summary information from existing reports and hydrodynamic modeling	- boat based measurements - localized hydrodynamic model application
8	Ice impacts	- design parameter for the cap	- literature review of impacts - empirical data from the harbor	- ice scour model application
9	Sea level rise	- design parameter for the cap	- plot expected trends on cross sections - generalize changes to current/wave regime	- modification of hydrodynamic model
9 ~~10~~	Construction complexity/impacts	- incorporate into cost estimate - defensibility of remedy	- review of comparable sites	- if cost estimate is high enough, perform limited value engineering study
10 ~~11~~	Ecological functionality of completed cap and impact on surrounding area	- design parameter for the cap - defensibility of remedy	- definition of biologically active zone - review of comparable sites - calculation in changes to riverway cross sectional area	- incorporation into updated functions and values assessment
11.	Silver Lake (Pittsfield) cap as presumptive design / starting point	- similar conditions - post-cap data indicates highly successful	- EPA to present case study	- bench scale study (column tests) using Avox sediments & Silver Lake cap design. Would help evaluate gas ebulition.

Delete; NOT appropriate for an interim cap